

REMARKS

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

Applicants note the Examiner's objections to the specification with regard to formal matters and appropriate amendatory action has been taken to revise the specification into closer conformance with the U.S. practice by eliminating reference to pending claims and also incorporating the required section headings. This should clearly meet all of the requirements in that regard.

Reverting to the claims, applicants note the rejection of Claims 32-43 under 35 U.S. C. §112, first paragraph, and the rejection of Claims 44 and 45 under 35 U.S. C. §112, second paragraph, by either failing to comply with the requirements in describing the subject matter and in regard to antecedent terminology. Accordingly, the claims have been amended to obviate the particular formal grounds of rejection and rendering these moot.

Furthermore, applicants note the rejection of Claims 32, 34 and 40 under 35 U.S. C. §102(b) as being allegedly anticipated by Conger, Sr., U.S. Patent No. 4, 648,840, as detailed in the Office Action.

Furthermore, Claim 33 has been rejected under 35 U.S. C. §103(a) as being unpatentable over Conger, Sr. in view of Tilden, U.S. Patent No. 2,814,877; Claim 35 as being unpatentable over Conger, Sr. in view of Maurer, et al., U.S. Patent No. 2,643,456; Claims 36 and 42-45 as being unpatentable over Conger, Sr. in view of Landgraf, et al., U.S. Patent No. 4,198,755; Claims 37-39 as being unpatentable over Conger, Sr. in view of Landgraf, et al. and further in view

of Karst, U.S. Patent No. 4,950,160; and Claim 41 as being unpatentable over Conger, Sr. in view of Saupe, et al., U.S. Patent No. 4,696,645.

Furthermore, Claims 32-45 stand rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 1-23 of applicant's U.S. Patent No. 4,616,321 with regard to which the present application is a divisional case. Furthermore, similarly, Claims 32-45 have been rejected as being unpatentable over Claims 1-8 of applicant's earlier U.S. Patent No. 6,719,561.

Accordingly, with regard to applicants earlier issued U.S. patents, applicants herewith submit a required Terminal Disclaimer, which meets the requirements in that connection and render the obviousness-type double patenting rejection as being moot.

Furthermore, in order to distinguish over the art which has been applied to the claims, applicants have amended Claim 32 to incorporate the further limitations that the cross-section of the supply line is reduced in size at a distance upstream from a free discharge end of the hollow needle (27). This particular further limitation added to Claim 32, which is supported by the disclosure commencing with the last paragraph on Page 12 of the specification, clearly distinguishes over the primary reference to Conger, Sr., U.S. Patent No. 4,648,840.

In particular, applicants note that a reduction in the cross-section of the supply line will clearly result in an effect in that the flow speed and the outlet speed of the through flowing medium is increased so as to contribute to an improvement in the efficiency of the abrasive treatment and also concurrently improving the mixing of the media with the abrasive or therapeutic agent.

Reverting to Conger, Sr., the latter fails to teach the provision of a nozzle for a medical or dental hand instrument for the discharge of an abrasive therapeutic agent wherein the outlet of a supply line is arranged in this specific mode. This is also applicable to the secondary

references, which also fail that particular aspect. In this connection, applicants note that Maurer, et al. only discloses nozzles in which the cross-sectional shape of the nozzles changes in the discharge region; however, it does not indicate or suggest that the cross-sectional size is changed or, in particular, reduced in order to obtain the above-mentioned inventive effects of improving the treatment performance. Consequently, even combining Conger, Sr. and Maurer, et al. would not lead to the dental instrument in accordance with the invention, as set forth in Claim 32, as amended and limited herein. Therefore, Claim 32 clearly and patentably distinguishes over any and all art, whether considered singly or in combination, and is deemed to be directed to patentable subject matter. This also pertains to the claims, which are dependent either directly or indirectly from the amended Claim 32, since these all set forth further structural and functional limitations and, thus, are also deemed to be patentable in conjunction therewith.

Furthermore, applicants also herewith present a new Claim 46, which is somewhat similar in nature to original Claim 32 with further limitations in that there is included a plurality of the exchangeable hollow needles (27) which each possess a different shape, size and opening size for the outlet opening and whereby a colored marking is provided for the different hollow needles in association with different kinds of therapeutic agents, the latter of which are normally accorded different colorings. This new additional Claim 46 is clearly supported by the description commencing in the second paragraph on Page 20 of the specification.

Although the Examiner has referred to Maurer, et al., U.S. Patent No. 2,643,456 as disclosing different nozzles for a dental instrument for the discharge of an abrasive therapeutic agent, the publication fails to teach any colorings or markings for different nozzles in order to facilitate a user of the dental instrument to distinguish between different nozzle shapes and sizes. This is an

inherent problem in an instrument, as disclosed in Maurer, et al., since the nozzle is at least partly surrounded by an outer tube 42, and consequently, that renders it extremely difficult for a user to distinguish between different nozzles employed in accordance with Maurer, et al.'s disclosure.

The newly presented Claim 46 clearly solves this important problem by providing different nozzles with different shapes and/or cross-sections whereby the nozzles are marked with different colors so as to enable a user of the instrument to immediately be able to select a correct nozzle, which is to be employed with a specific occasion or for a specific treatment.

The concept of equipping different nozzles of different shapes and cross-sections with different colored marks is not at all disclosed nor suggested in the prior art and is, therefore, directed to clearly allowable and novel subject matter, which is fully supported by the disclosure.

Reverting to the rejection of Claim 44, that particular claim has been rejected as allegedly lacking an inventive step in view of the publication of Conger, Sr. in view of Landgraf, et al. Hereby, the Examiner argues that it would have been obvious to apply the teaching of using a hand piece which comprises first and second portions connected for rotation movement relative to each other due to the dental instrument, as disclosed by Conger, Sr.

However, applicants respectfully take issue with the Examiner's position on this point and note that a combination of the publications of Conger, Sr. and Landgraf would not be obvious to one skilled in the art.

Although Landgraf, et al. discloses a dental hand piece comprising two sections, which are connected in a manner whereby one part is rotatable with respect to the other part, Landgraf, et al. discloses a completely different type of instrument. Whereas Conger, et al., as in the present invention, relates to a dental instrument for discharging an abrasive material, Landgraf, et al.

discloses a hand piece with a driving section to drive a rotatable tool. The driving section comprises a driving motor and a drive shaft for transmitting the rotation of the motor to the tool.

Consequently, on a comparison of the two dental instruments disclosed by respectively Conger, Sr. and Landgraf, et al., it is quite apparent that the interior of the dental hand pieces of these two publications are completely different from each other. The treatment instrument of Conger, Sr. is directed to a concept of providing a pressurized medium, which comprises an abrasive material, whereby in such an instance, it is necessary to provide a supply line extending through the hand piece which is arranged in a manner whereby the medium is reliably and efficiently forwarded to the nozzle. In such a structure and application, it would not be obvious for a person skilled in the art to divide the hand piece in different sections, since this may result in the problem that the supply line for the pressurized medium will be subject to leakage, which would significantly reduce the performance of the treatment.

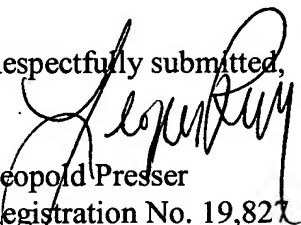
It remained for the present applicants to disclose, for the first time with an instrument of this type, the concept of utilizing a hand piece comprising two sections, which are connected in a manner so as to be rotatable with respect to each other. In that regard, it is also to be taken in consideration that all prior art publications, which are directed to such types of instruments for discharging an abrasive agent, fail to disclose the concept of providing a hand piece wherein the front region can be freely rotation in order to improve the hand link by a dentist or a user.

In summation, applicants respectfully submit on the basis of the foregoing, Claim 44, in addition to all of the other claims being presented herewith for the Examiner's consideration, are considered to be directed to allowable and patentable subject matter. The early and favorable reconsideration of the application and issuance of the Notice of Allowance is earnestly solicited.

However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Finally, pertaining to the enclosed Terminal Disclaimer, which is deemed to fulfill all of the requirements set forth in the Office Action, applicants also include a check in the amount of \$130.00 for the required Terminal Disclaimer fee.

Respectfully submitted,



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Enclosure: Terminal Disclaimer; and
A check in the amount of \$130.00 for the Terminal Disclaimer fee.